

**IN THE CLAIMS:**

1 1. (CANCELLED)

1 2. (CANCELLED)

1 3. (CANCELLED)

1 4. (CANCELLED)

1 5. (CANCELLED)

1 6. (CURRENTLY AMENDED) A method of claiming ownership of a disk by a network  
2 device in a network storage system comprising the steps of:

3 writing ownership information to a predetermined area of the disk; and  
4 setting a small computer system interface level 3 persistent reservation tag to a  
5 state of network device ownership.

1 7. (ORIGINAL) The method of claim 6 wherein the ownership information further com-  
2 prises a serial number of a network device.

1 8. (ORIGINAL) The method of claim 6, wherein the network device comprises a file  
2 server.

1 9. (CURRENTLY AMENDED) A network storage system comprising:  
2 a plurality of network devices;  
3 one or more switches, each network device connected to at least one of the one or  
4 more switch; and  
5 a plurality of disks having a first ownership attribute written to a predetermined  
6 area of the disk and a second ownership attribute in the form of a small computer system  
7 interface persistent reservation tag, each disk connected to at least one of the plurality of  
8 switches.

1 10. (CANCELLED)

1 11. (CURRENTLY AMENDED) The network storage system of claim 9, wherein the  
2 small computer system interface persistent reservation tag is ~~second ownership attribute~~  
3 further comprises a small computer system interface level 3 persistent reservation tag.

1 12. (CURRENTLY AMENDED) The networked storage system of claim ~~11~~ 9, wherein  
2 each disk that is owned by the network device has the small computer system interface  
3 level-3 persistent reservation tag is set such that only the network device may write to the  
4 disk.

1 13. (CURRENTLY AMENDED) The network storage system of claim ~~10~~ 9, wherein the  
2 first ownership information attribute further comprises ~~of~~ a serial number of the network  
3 device that owns that particular disk.

1 14. (CURRENTLY AMENDED) The network storage system of claim ~~10~~ 9, wherein  
2 each of the plurality of file servers can read data from each of the plurality of disks.

1 15. (CURRENTLY AMENDED) The network storage system of claim ~~10~~ 9, wherein  
2 only a network device that owns one of the plurality of disks can write data to the one  
3 disk.

1 16. (ORIGINAL) The network storage system of claim 9, wherein the network devices  
2 comprise file servers.

1 17. (CURRENTLY AMENDED) A network storage system comprising:  
2 one or more switches;  
3 a plurality of disks; and  
4 means for writing ownership information to a predetermined area of a disk; and  
5 means for setting a small computer system interface level 3 persistent reservation  
6 tag of a disk.  
7 ~~a plurality of network devices, each of the network devices including means for~~  
8 ~~claiming ownership of one of the plurality of disks in the network storage system.~~

1 18. (CANCELLED)

1 19. (ORIGINAL) The network storage system of claim 17, wherein the network devices  
2 comprise file servers.

1 20. (CURRENTLY AMENDED) A network storage system comprising:  
2 one or more switches interconnected to form a switching fabric;  
3 a plurality of disks, each of the disks connected to at least one of the switches,  
4 each disk storing a first ownership attribute to a predetermined area of a disk and  
5 each disk associated with a second ownership attribute in the form of a small  
6 computer system interface persistent reservation; and  
7 one or more network devices, interconnected with the switching fabric, each of  
8 the network devices being adapted to own a predetermined set of disks of the plurality of  
9 disks through use of the first and second ownership attributes.

1 21. (CANCELLED)

1 22. (CANCELLED)

1 23. (CURRENTLY AMENDED) The network storage system of claim ~~22~~ 20, wherein  
2 ~~the ownership information~~ first ownership attribute further comprises a serial number of  
3 one of the one or more network devices.

1 24. (CURRENTLY AMENDED) The network storage system of claim 20, wherein the  
2 small computer system interface persistent reservation second ownership information is a  
3 small computer system interface level 3 persistent reservation.

1 25. (ORIGINAL) The network storage system of claim 20, wherein each of the network  
2 devices further comprises a disk ownership table, the disk ownership table containing  
3 ownership data for each of the disks.

1 26. (ORIGINAL) The network storage system of claim 25, wherein the ownership table  
2 further comprises a world wide name for each of the disks, the world wide name being  
3 used for identification of each of the disks.

1 27. (CURRENTLY AMENDED) A computer-readable medium, including program in-  
2 structions executing on network device, for performing the steps of:  
3 writing ownership information to a predetermined area of a disk; and  
4 setting a small computer system interface level 3 persistent reservation tag to a  
5 state of network device ownership.

1 28. (PREVIOUSLY PRESENTED) A method for a network device to manage owner-  
2 ship of one or more storage devices in a network storage system, comprising the steps of:  
3 reading ownership information from a predetermined area of each storage device;  
4 in response to reading the ownership information, creating an ownership table that  
5 identifies the one or more storage devices owned by the network device;  
6 reading a small computer system interface (SCSI) level 3 persistent reservation  
7 tag from each storage device;

8           comparing the SCSI level 3 persistent reservation tag to the ownership informa-  
9   tion of the same storage device and, if there is not a match, changing the SCSI level 3  
10   persistent reservation tag to match the ownership information; and  
11           configuring the one or more storage devices identified in the ownership table into  
12   at least one volume for use by the network device.

1   29. (PREVIOUSLY PRESENTED) The method of claim 28 further comprising:  
2       setting ownership information at the predetermined area of each storage device.

1   30. (PREVIOUSLY PRESENTED) The method of claim 28 wherein the step of con-  
2   figuring further comprises:  
3       organizing the one or more storage devices into at least one Redundant Array of  
4   Independent Disks (RAID) group.

1   31. (PREVIOUSLY PRESENTED) The method of claim 28 further comprising:  
2       wherein the predetermined area of the one or more storage devices is sector zero  
3   of the one or more storage devices.

1   32. (PREVIOUSLY PRESENTED) The method of claim 28 further comprising:  
2       wherein the ownership information is a serial number of the network device that  
3   owns that particular storage device.

1 33. (PREVIOUSLY PRESENTED) The method of claim 28 further comprising:  
2 wherein the ownership table includes a world wide name for each of the storage  
3 devices, the world wide name being used to identify each of the storage devices.

1 34. (PREVIOUSLY PRESENTED) A network device for managing ownership of one  
2 or more storage devices in a network storage system, comprising the steps of:  
3 means for reading ownership information from a predetermined area of each stor-  
4 age device;  
5 in response to reading the ownership information, means for creating an owner-  
6 ship table that identifies the one or more storage devices owned by the network device;  
7 means for reading a small computer system interface (SCSI) level 3 persistent res-  
8 ervation tag from each storage device;  
9 means for comparing the SCSI level 3 persistent reservation tag to the ownership  
10 information of the same storage device and, if there is not a match, changing the SCSI  
11 level 3 persistent reservation tag to match the ownership information; and  
12 means for configuring the one or more storage devices identified in the ownership  
13 table into at least one volume for use by the network device.

1 35. (PREVIOUSLY PRESENTED) A computer readable medium containing executable  
2 program instructions for managing ownership of one or more storage devices in a net-  
3 work storage system, the executable program instructions comprising program instruc-  
4 tions for:  
5 reading ownership information from a predetermined area of each storage device;  
6 in response to reading the ownership information, creating an ownership table that  
7 identifies the one or more storage devices owned by the network device;

8           reading a small computer system interface (SCSI) level 3 persistent reservation  
9 tag from each storage device;

10           comparing the SCSI level 3 persistent reservation tag to the ownership informa-  
11 tion of the same storage device and, if there is not a match, changing the SCSI level 3  
12 persistent reservation tag to match the ownership information; and

13           configuring the one or more storage devices identified in the ownership table into  
14 at least one volume for use by the network device.

1   36. (PREVIOUSLY PRESENTED) A network storage system, comprising:

2           one or more storage devices, each storage device having a predetermined area for  
3 storing ownership information and each storage device having a small computer system  
4 interface (SCSI) level 3 persistent reservation tag;

5           at least one network device having an ownership table constructed based upon  
6 the ownership information from each storage device;

7           the at least one network device having an ownership layer for comparing the SCSI  
8 level 3 persistent reservation tag to the ownership information of the same storage device  
9 and, if there is not a match, changing the SCSI level 3 persistent reservation tag to match  
10 the ownership information; and

1           the at least one network device having a disk storage layer for configuring the one  
2 or more storage devices identified in the ownership table into at least one volume for use  
3 by the network device.

1   37. (PREVIOUSLY PRESENTED) The network storage system of claim 36 further  
2 comprising:

3           the ownership layer adapted to set ownership information at the predetermined  
4 area of each storage device.



1 38. (PREVIOUSLY PRESENTED) The network storage system of claim 36 further  
2 comprising:  
3 the disk storage layer organizing the one or more storage devices into at least one  
4 Redundant Array of Independent Disks (RAID) group.

1 39. (PREVIOUSLY PRESENTED) The network storage system of claim 36 further  
2 comprising:  
3 wherein the predetermined area of the one or more storage devices is sector zero  
4 of the one or more storage devices.

1 40. (PREVIOUSLY PRESENTED) The network storage system of claim 36 further  
2 comprising:  
3 wherein the ownership information is a serial number of the network device that  
4 owns that particular storage device.

1 41. (PREVIOUSLY PRESENTED) The network storage system of claim 36 further  
2 comprising:  
3 wherein the ownership table includes a world wide name for each of the storage  
4 devices, the world wide name being used to identify each of the storage devices.

1 42. (NEW) The method of claim 6 wherein the small computer system interface persis-  
2 tent reservation tag and the ownership information at the predetermined area of the disk  
3 indicate ownership by the same network device.

1 43. (NEW) The method of claim 6 wherein the small computer system interface persis-  
2 tent reservation tag is a small computer system interface level 3 persistent reservation tag.

1 44. (NEW) A method for a network device to manage ownership of one or more storage  
2 devices in a network storage system, comprising the steps of:

1 reading ownership information from a predetermined area of each storage device;  
2 accessing a small computer system interface (SCSI) persistent reservation tag as-  
3 sociate with each storage device;

4 comparing the SCSI persistent reservation tag to the ownership information of the  
5 same storage device and, if there is not a match, changing the SCSI persistent reservation  
6 tag to match the ownership information; and

7 configuring the one or more storage devices for use by the network device.

1 45. (NEW) The method of claim 44 wherein the small computer system interface (SCSI)  
2 persistent reservation tag is a small computer system interface level 3 (SCSI-3) persistent  
3 reservation tag.

1 46. (NEW) The method of claim 44 further comprising:

1 in response to reading the ownership information, creating an ownership table on  
2 the network device that identifies the one or more storage devices owned by the network  
3 device; and

4 using the ownership table to configure the one or more storage devices into at  
5 least one volume.

1 47. (NEW) The method of claim 44 further comprising:

2 setting ownership information at the predetermined area of each storage device.

1 48. (NEW) The method of claim 44 further comprising:  
2 wherein the predetermined area of the one or more storage devices is sector zero  
3 of the one or more storage devices.

1 49. (NEW) A network storage system, comprising:  
2 means for reading ownership information from a predetermined area of each stor-  
3 age device;  
4 means for accessing a small computer system interface (SCSI) persistent reserva-  
5 tion tag associate with each storage device;  
6 means for comparing the SCSI persistent reservation tag to the ownership infor-  
7 mation of the same storage device and, if there is not a match, changing the SCSI persis-  
8 tent reservation tag to match the ownership information; and  
9 means for configuring the one or more storage devices for use by the network de-  
10 vice.

1 50. (NEW) A computer readable medium containing executable program instructions for  
2 manage ownership of one or more storage devices, the executable program instructions  
3 comprising program instructions for:  
4 reading ownership information from a predetermined area of each storage device;  
5 accessing a small computer system interface (SCSI) persistent reservation tag as-  
6 sociate with each storage device;  
7 comparing the SCSI persistent reservation tag to the ownership information of the  
8 same storage device and, if there is not a match, changing the SCSI persistent reservation  
9 tag to match the ownership information; and  
10 configuring the one or more storage devices for use by the network device.